element in the form of a bellows with a long stroke. Additional balancing for the slide valve is provided by connecting the space above the valve to the supply line.

SUB CODE: 21/ SUBM DATE: 25Dec64

L 11449-66 EWT(m)/T DJ

ACC NR: AP6002949 (A) SOURCE CODE: UR/0286/65/000/024/0110/0110

INVENTOR: Gayev, D. V.; Golubev, G. M.; Levin, M. I.; Malykhin, A. A.; Margulis, Yu. I.; Spiridonov, G. M.

37
B

ORG: none

TITLE: A temperature regulator for an internal combustion engine. Class 42, No. 177186 [announced by Central Scientific Research Diesel Institute (Tsentral'nyy nauchno-issledovatel'skiy dizel'nyy institut); and the Chelyabinsk Tractor Plant (Chelyabinskiy traktornyy zavod)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 110

TOPIC TAGS: internal combustion engine, air cooled engine, temperature regulator

ABSTRACT: This Author's Certificate introduces a temperature regulator for an air-cooled internal combustion engine. The unit contains a pickup with a sensing element which operates a spring slide valve to regulate the oil flow to the hydraulic clutch of the blower. The reliability of the device is improved by mounting the pickup on an engine component, e.g. on a cylinder head, and by making the sensing

Card 1/3 UDC: 621.43-543.2-533.65

MALYKHIN, A.A.

Selecting thermal regulation systems for air cooled engines.
Trakt. i sel'khozmash. no.11:3-5 N '64.
(MIRA 18:1)

1. TSentral'nyy nauchno-issledovatel'skiy dizel'nyy institut.

MALYKH, Ye.T.; PAL'MOV, Ye.V., prof., rukovoditel'

Certain limiting parameters in rolling on sheet mills.
Izv. vys. ucheb. zav.; chern. met. 6 no.2:77-81 '63.
(MIRA 16:3)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.

(Rolling (Metalwork))

MALYKH, Ye.T.

Calculating the length of the deformation area during cold sheet rolling. Izv. vys. ucheb. zav.; chern. met. 5 no.8:77-78 '62.
(MIRA 15:9)

1. Ural'skiy nauchno-tekhnicheskiy institut chernykh metallov.
(Rolling (Metalwork))

MALYKH, Ye.T.

Calculating certain limit parameters in cold strip rolling. Izv. vys.ucheb.zav.; chern.met. 5 no.6:76-80 '62. (MIRA 15:7)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.
(Rolling (Metalwork))

MALYKH, V.D.; SERD, M.A.

Measuring the length of stay of atoms in light sources for spectrum analysis. Opt. i spektr. 16 no.2:368-369 F '64. (MIRA 17:4)

L 1308-66

ACCESSION NR: AR5014395

ties for a number of metals were also studied as a function of the composition of the atmosphere in which the discharge takes place. It is found that when H_2 is substituted for air in the arc gap, the whole spectrum is weakened, while argon substitution intensifies the entire spectrum. V. Yeliseyev.

SUB CODE: ME, OP ENCL: 00

Card 2/2

L 1308-66 EWT(1)/EWT(m)/EPE(n)-2/EWG(m)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(c) IJP(c)
ACCESSION NR: AR5014395 JD/AT UR/0058/65/000/004/D031/D031

SOURCE: Ref. zh. Fizika, Abs. 4D232

45

AUTHOR: Malykh, V. D. 44,55

B

TITLE: Spectroscopic analysis of diffusion processes in an arc discharge

CITED SOURCE: Sb. Spektroskopiya. M., Nauka, 1964, 50-52

TOPIC TAGS: plasma diffusion, arc discharge, spectrographic analysis

TRANSLATION: The coefficients of diffusion of a number of elements with various atomic weights are determined from the average time which the vapors of a substance remain in a discharge (τ). This time was determined by recording the variation in the intensity of lines or molecular bands in the discharge spectrum during pulsed injection of the substance into the discharge. A two-channel photoelectric unit and an MPO-2 oscillograph were used for recording vapor luminescence. A smoothly falling curve was plotted for the coefficient of diffusion as a function of the atomic number. A considerable deviation from the curve is observed for Hg atoms. τ is determined for Ba atoms and ions, Ca atoms and CaO molecules. Line intensi-

Card 1/2

RAYKHBAUM, Ya.D.; MALYKH, V.D.; LUZHNOVA, M.A.

Scintillation method for spectral analysis of tantalum and niobium in ores. Zav. lab. 29 no.6:677-680 '63.
(MIRA 16:6)

1. Irkutskiy gosudarstvennyy nauchno-issledovatel'skiy institut redkikh metallov.

(Tantalum ores--Spectra)
(Niobium ores--Spectra)

On the Possible Cause ....

Table 3:

Element	Wavelength, Å	$\tau \cdot 10^3$, sec								
		Without additive	Li_2CO_3	LiF	LiCl	LiI	Na_2CO_3	NaF	NaCl	NaBr
Lithium	4602.86	1	-	-	-	-	2.3	3.5	2.3	3.0
Thallium	5350.46	1.95	3.7	6.0	4.2	2.7	3.7	6.7	3.7	4.5
Mercury	4358.35	3.8	2.7	2.9	2.7	-	2.6	2.8	2.9	2.5

Card 7/7

On the Possible Cause ....

Table 2:

Element	Ionisation Potential, eV	Wavelength, Å	Excitation Energy, eV	$\tau \cdot 10^3$, sec: Without "carrier"	$\tau \cdot 10^3$, sec: Gallium Oxide	Relative Change in τ
Lithium	5.39	4602.86	4.54	1.4	2.6	1.86
Thallium	6.11	5350.46	3.28	3.0	5.2	1.73
Zinc	9.39	4810.53	6.66	2.7	4.3	1.59
Mercury	10.43	4358.35	7.73	6.0	5.3	0.88

Card 6/7

On the Possible Cause ....

Table 1:

Element	Wave-length, Å	$\tau \cdot 10^3$, sec			
		Without "carrier"	Metallic Silver	Silver Chloride	Gallium Oxide
Lithium	4602.86	1.0	1.1	2.4	1.95
Thallium	5350.46	1.9	2.1	4.6	3.8

Card 5/7

introduced into the arc (10 A DC arc).
There are 4 figures, 3 tables and 8 references: 4 Soviet
and 4 non-Soviet.

SUBMITTED: May 26, 1960

Card 4/7

of τ for lithium and thallium in the presence of the "carriers" ($\sim$ 10 A DC arc). Table 2 shows the dependence of the "carrier" effect on the ionisation potential of the various elements (15 A DC arc). It is concluded from these results that the effect of the "carrier" is associated with an increase in τ but that this increase in τ is due not only to thermal but also to electrical prameters in the discharge column. Probe measurements of the radial field distribution were also carried out. The field distribution was obtained with double rotating probes, consisting of two insulated nichrome wires, 0.2 mm in diameter, and located at a distance of 1.5 mm from each other. The two wires intersected at the arc at the mid-point of the discharge gap and moved across it in the horizontal direction with a velocity of 80 cm/sec. The current between the two probes was measured with an oscilloscope. These measurements showed that the introduction of "carriers" leads to a considerable reduction in the field gradient in the radial direction. The reason for this is the formation of negative ions. Table 3 shows the change in τ when various chemical compounds are

On the Possible Cause ....

probes which were made of nichrome wire, 0.2 mm in diameter and 80 - 100 mm long. These probes were fixed on the axis of a synchronous motor ([illegible] (SD-60)), supplied from the [illegible] (ZG-12) generator. The probes were so arranged that they moved in a horizontal plane and intersected the arc at the mid-point of the discharge gap. The linear velocity of the probes in the discharge gap could be varied between 30 and 120 cm/sec. The evaporation of the elements deposited on the probes and the entry of the vapour into the discharge were thus pulsed and occurred while the probes were within the discharge gap. The lines of the elements were recorded with the aid of the [illegible] (KS-55) glass spectrograph, incorporating a two-channel photo-electric attachment. Changes in the intensities of the lines and the probe current were measured at the same time. On removal of the probe from the discharge gap, i.e. termination of evaporation, the intensity of the lines was found to decrease exponentially. It was therefore possible to determine the average time of existence of the atoms in the excitation zone ([illegible]). Table 1 gives the measured values

S/051/61/010/004/004/007
E032/E314

AUTHORS: Raykhbaum, Ya.D. abd Malykh, V.D.

TITLE: On the Possible Cause of the "Carrier" Effect in Spectral Analysis

PERIODICAL: Optika i spektroskopiya, 1961, Vol. 10, No. 4, pp. 524 - 527

TEXT: It is well known that the addition of small amounts of certain compounds ("carriers") to the sample to be analysed leads to an increase in the intensity of the lines belonging to the elements under analysis. The present authors have carried out an experimental investigation of this effect. The compounds which are usually employed as the "carriers" were placed in the channel in the electrodes of a DC arc. The electrodes were made of spectroscopically pure carbon and the channel in them was 3 mm in diameter, 3.5 mm long and the wall thickness was 0.5 - 1 mm. The experiments were carried out with arc currents of 5 - 15 A and the lower electrode served as the anode. The materials on which the effect of the "carrier" was investigated were deposited on the surface of

Card 1/7

83915

S/051/60/009/004/001/034
E201/E191

A Spectroscopic Study of Diffusion of Atoms in an Electric Arc

1.05×10^{-3} sec for Li, 2.10×10^{-3} sec for Tl (a table on p 426). The effective diffusion coefficients of the atoms were inversely proportional to τ; they ranged from 20.2 cm^2/sec for Li to 10.1 cm^2/sec for Tl (last column of the table on p 426). With increase of the arc current from 6 to 20 A, the value of τ rose: τ was proportional to i^k, where $k = 1.1\text{-}1.3$ (Fig 3).

There are 3 figures, 1 table and 5 references: 3 Soviet, 1 English and 1 German.

SUBMITTED: January 19, 1960

Card 2/2

83915

S/051/60/009/004/001/034

E201/E191

26.2312

AUTHORS: Raykhbaum, Ya.D., and Malykh, V.D.

TITLE: A Spectroscopic Study of Diffusion of Atoms in an Electric Arc

PERIODICAL: Optika i spektroskopiya, Vol 9, No 4, 1960, pp 425-427

TEXT: A d.c. arc was struck in air between two carbon electrodes, 5 mm apart. Probes of Nichrome wire, coated with chlorides, were transported rapidly (120 cm/sec) through the arc. In this way "pulses" of Li, Na, Ca, Zn, Ag, Cd and Tl atoms were introduced into the arc and their emission lines between 4400 and 5700 Å were recorded with a glass spectrograph KC-55 (KS-55) and two photomultipliers ФЭУ-19 m (FEU-19 m). The photomultipliers were connected to a cathode-ray oscillograph ЭО-7 (EO-7) whose screen was photographed to obtain the time dependence of the emission intensity I (Fig 1), given by $I = I_0 \exp(-t/\tau)$, where t is the time and τ is the average duration of stay of an atom in the arc. Values of τ were found by plotting $\log I = f(t)$, as in Fig 2. These values were of the order of 10^{-3} sec, increasing with the atomic number of the element:

Card 1/2

83358

S/139/60/000/004/016/033
E032/E514

Current Dependence of Line Intensities in Arc Spectra

It follows that the thickness of the column layers in which self-reversal of resonance lines takes place also decreases with current. This was confirmed for lead and mercury lines. A considerable decrease in the self-reversal of resonance lines was observed when reabsorption as a whole was increasing. All these effects are important to the explanation of certain effects observed in spectrum analysis. Thus, when the concentration of the element is low, an increase in the discharge current leads to a considerable increase in the line intensities. At high concentrations re-absorption rapidly increases, and is accompanied by a reduction in the concentration sensitivity and the slope of logarithmic intensity versus current curves. There are 5 figures, 1 table and 8 references: 4 Soviet, 2 German and 2 English.

ASSOCIATION: Irkutskiy nauchno-issledovatel'skiy institut redkikh metallov (Irkutsk Scientific Research Institute for Rare Metals)

SUBMITTED: July 4, 1959

Card 4/4

03358

S/139/60/000/004/016/033
E032/E514

Current Dependence of Line Intensities in Arc Spectra

Arc discharge current (A)	Pure carbon electrodes		Na_2CO_3 in electrode channel	
	Photographic method	probe method	Photographic method	probe method
5	3.83	2.59	3.33	2.12
7.5	5.67	3.77	3.90	3.45
10	7.00	5.92	4.84	4.52
15	8.32	6.88	6.16	5.75
20	9.65	8.75	7.66	7.06

The above table gives the diameter of the discharge column (mm). The electrode diameter was 6 mm. The results indicate that the changes in line intensity are connected with changes in the radius of the emitting column. This radius is different from the radius of the current-conducting channel of the arc. The excitation potential must be taken into account in theoretical calculations of the diameter of the emitting column. As the discharge current increases, the difference between the two radii becomes smaller.

Card 3/4

Current Dependence of Line Intensities in Arc Spectra

values of k were 1.2 - 1.35. When salts of metals having low ionization potentials were inserted into the electrode channels, the magnitude of k decreased to 0.5 - 1.05. A similar result was obtained for the intensity as a function of arc discharge current. For a carbon arc the intensity was proportional to the discharge current raised to a power of 1.2 - 1.3. The introduction of sodium salts into the electrode channel reduced this power to 0.8 - 1. This applies to small quantities of the salts. When the amount of salts introduced into the electrode channel is increased, reabsorption becomes important. In order to determine this effect, measurements were carried out of the radius of the emitting column by the photographic method, and the current distribution in the discharge by the probe method. The probe method gave different results from the photographic method. The results obtained are summarized in the following table.

83358

S/139/60/000/004/016/033
E032/E514

5.5310

AUTHORS: Raykhbaum, Ya. D. and Malykh, V.D.

TITLE: Current Dependence of Line Intensities in Arc Spectra

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp. 147-151

TEXT: Measurements were carried out of line intensities and discharge-column radii as functions of the current. The spectra were photographed with the aid of an ISP-28 spectrograph. A determination was made of the integral intensity of lines when a given amount of the element under investigation was evaporated from the anode. The electrodes were made of carbon and had a diameter of 6 mm. The average rate of evaporation was determined by measuring the time of existence of a characteristic line of the element in the arc spectrum. Steps were taken to ensure that the rate of evaporation remained constant for different currents. The radius of the discharge column was determined by photographing the column and then measuring the width of the image obtained. Measurements showed that for arc currents between 5 and 20 A the relation between the radius of the column and the current flowing through it can be represented by the formula $r_o^2 = ai^k$ where $k > 1$. For a carbon arc the

Card 1/4

RAYKHBAUM, Ya.D.; KOSTYUKOVA, Ye.S.; CHERNENKO, A.I.; MALYKH, V.D.

Measuring the evaporation rate of elements and their compounds in an electric arc. Fiz.sbor. no.4:285-289 '58. (MIRA 12:5)

(Electric arc) (Evaporation)

24(7) PHASE I BOOK EXPLOITATION SOV/1700

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956.
t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) /Lvov/ Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many branches of spectroscopy: spectra of rare earths, electromagnetic separation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.) SOV/1700

Makulov, N.A. Investigation of the Relation of the Composition of the Sample to the Emission Cloud Composition in Spectrum Analysis 276

Raykhbaum, Ya.D., Ye.S. Kostyukova, A.I. Chernenko, and V.D. Malykh. Measuring the Vaporization Rate of Elements and Their Compounds in an Electric Arc 285

Zolotukhin, G.Ye. Investigation of the Effect of Electrode Cooling Conditions on Spectral Line Intensity 289

Rudnevskiy, N.K., and Ye.S. Obukhova. Special Characteristics of the Entry of Binary Alloys Into the Gas Cloud of an A-C Arc 292

Rudnevskiy, N.K., and A.I. Dryakhlov. Special Characteristics of the Entry of a Copper-Zinc Alloy Into a Spark 296

Card 17/31

degree of burnup, the dimensions of the active zone, the critical reactor load, and the type and amount of moderator. The second section deals with thermodynamic and electrical engineering problems involved in such a converter, such as losses, thermal efficiency, conversion efficiency, volt-ampere characteristics, and methods of minimizing the losses. The third section presents the results of reactor tests of three-element assemblies of thermionic converters, made in the loop channel of the reactor of the first atomic electric stations of the SSSR. Tests were made on different fuel rods both under diffusion and arc-discharge conditions. For the particular reactor tested, the losses amounted to 12% of the theoretical output power for ohmic electrode resistance and commutation, 10% for heat leakage from the cathode, and 5% due to the axial inhomogeneity of the heat release in the assembly. This reduces the theoretical power rating of 2.7--3 w/cm^2 to a value of 2 w/cm^2. Orig. art. has: 8 figures.

SUB CODE: 10,20/ ORIG REF: 002/ OTH REF: 004

SUBM DATE: none

Card 2/2

L 24317-66 EWT(1)/EWT(m)/EPF(n)-2/EWG(m) WW

ACC NR: AT6006757 SOURCE CODE: UR/3158/65/000/027/0001/0017 B+1

AUTHOR: Pupko, V. Ya.; Malykh, V. A.; Gusakov, I. M.; Petrovskiy, V. G.; Dmitriyev, V. M.; Yur'yev, Yu. S.

ORG: Physics and Power Institute, State Committee on the Use of Atomic Energy SSSR (Fiziko-energeticheskiy institut, Gosudarstvenny komitet po ispol'zovaniyu atomnoy energii SSSR)

TITLE: Certain problems in the development of a thermionic emission reactor converter

SOURCE: Obninsk. Fiziko-energeticheskiy institut. Doklady, no. 27, 1965. Nekotoryye problemy razrabotki termoemissionnogo reaktora-preobrazovatelya, 1-17

TOPIC TAGS: thermoelectric convertor, neutron physics, nuclear reactor, volt ampere characteristic

ABSTRACT: This is a review article dealing with several neutron-physics and engineering problems connected with the development of a thermionic converter in which heat energy is converted into electricity by using an electron emitter in contact with the fissioning material of a nuclear reactor. The first section of the paper deals with possible neutron-physics characteristics of such reactors, such as the use of fast or slow neutrons in the reactor, the dependence of the U-235 charge and the volume of the active zone of thermionic reactors on the concentration of the uranium in the active zones for different thicknesses of the beryllium reflector and for different cathode materials, the distribution of the energy release over the active zone, the

Card 1/2

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B102/B214

A pulsed fast reactor

assemblies and slowly moving main block for the determination of the most important parameters of the reactor; experiments with a core assembly (unmoved), experiments with rotating (5000 rpm) main block and a Ra-α-Be source in the core for the investigation of the effect of the multiplication factor, etc. The most important results are represented graphically. For example, Fig. 8 shows the dependence of the half width θ of a pulse on the reactivity; the dashed line holds for the quasistationary case, the dot-dash line for the case of $\theta = K(\tau/\alpha)^{1/3}v^{-2/3}$, where v is the velocity of motion of the (rotating) main block; in the quasistationary case $\theta = 2\sqrt{\varepsilon_m/\alpha v^2}$, where ε_m is the reactivity at the maximal multiplication factor; $\varepsilon = \varepsilon_m - \alpha x^2$, where x is the displacement of the main block. The reactor has been actually used for the measurement of the total, scattering, capture, and fission cross sections by the time-of-flight method. Further experiments will be carried out with a view to obtaining increase of power and decrease of the pulse duration. There are 15 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J. Orndorf, Nucl. Sci. and Engng, 2, No. 4, 450 (1957).

Card 4/4

22873
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B102/B214

A pulsed fast reactor

decrease of 2-1.1 %; the rough regulator allows a reactivity change of 2.4 %, the manual regulator 0.1 %, and the automatic regulator 0.036 %. The reactor possesses also a reactivity booster for the production of one intensive pulse. The control and shield system is an automatically functioning electronic arrangement with BF_3 counters and ionization chambers. The whole reactor is placed in a room of size 10·10·7 m whose concrete walls allow complete protection from radiation. The most important experimental arrangement consists of a 1000 m long neutron conductor, a metal tube, 400 mm in diameter in the first part and 800 mm in the second part in which a pressure of 0.1 mm Hg is maintained. This conductor connects a chain of socalled "intermediate pavilions" (at distances of 70, 250, 500, 750, and 1000 m from the reactor) in which experiments can be carried out. There is also an additional neutron conductor of 100 m length. The reactor chamber is joined to an experimental chamber in which four neutron beams of up to 800 mm diameter are available. There us such an experimental chamber also above the reactor chamber. Various experiments were carried out with the reactor and they are described in the present paper. These are experiments with stand

Card 3/4

A pulsed fast reactor

one hundredth of that of the usual steady uranium reactor. The pulses appear because whenever the reactor becomes overcritical a burst of prompt neutrons results. The half width of these pulses is 36 μsec. The frequency with which the pulses are repeated can be varied between 8 and 80 pulses/sec. Fig. 2 shows the construction of this reactor. The periodic change in the reactivity is brought about by the displacement of the two U^{235}-blocks placed in two disks that can be rotated. The main block is pressed in the form of a disk, 1100 mm in diameter, and can be rotated with a peripheral velocity of 276 m/sec (at 6000 rpm) during which it passes through the core center. The reactivity change obtainable from the motion of the main block is 7.4 %, that obtainable from the motion of the auxiliary block is 0.4 %. The stationary part of the core consists of plutonium lumps in steel jackets. The reactor is started by a rough regulator, in this case a movable part of the reflector. It gives a reactivity change at the rate of $13 \cdot 10^{-5} - 1.3 \cdot 10^{-5}$ sec^{-1}. The manually operated rod is also a part of the reflector. Two plutonium rods in electromagnetic suspension serve as scram. They can be separated from the core with an acceleration of 20 g. Their separation causes a reactivity

Card 2/3 4

22873
S/089/61/010/005/001/015
B102/B214

21.1910 21.4210
26.2200

AUTHORS: Blokhin, G. Ye., Blokhintsev, D. I., Blyumkina, Yu. A., Bondarenko, I. I. Deryagin, B. N., Zaymovskiy, A. S., Zinov'yev, V. P., Kazachkovskiy, O. D., Kim Khen Bon, Krasnoyarov, N. V., Leypunskiy, A. I., Malykh, V. A. Nazarov, P. M., Nikolayev, S. K., Stavisskiy, V. Ya., Ukraintsev, F. I., Frank, I. M., Shapiro, F. L., Yazvitskiy, Yu. S.

TITLE: A pulsed fast reactor

PERIODICAL: Atomnaya energiya, v. 10, no. 5, 1961, 437-446

TEXT: The present paper gives a description of the pulsed fast reactor of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research) which became critical in June, 1960. This reactor, called IBR (IBR) reactor, serves as pulsed fast neutron source (mean power ≈1 kw) for physical investigations, particularly for time-of-flight experiments. Its most distinguishing feature is the very small contribution (~10-4) of the delayed neutrons in its normal operation; it is about

Card 1/8 4

PUPKO, V. Ya.; MALYKH, V. A.; GUSAKOV, I. M.; PETROVSKIY, V. L.; DMITRIYEV, V. M.; YUR'YEV, Yu. S.

"Some problems in the development of a thermionic research converter."

report to be presented at Intl Conf on Thermionic Electrical Power Generation, London, 20-24 Sep 65.

USSR State Comm for Applications of Atomic Energy, Moscow.

The Heart of AES

ly deviated by the magnetic field, but the light atoms of helium (if there was a "puncture" and they penetrated into the inner of the cover) are strongly deviated, hit the plate fixed on the corresponding place, and thus indicate the spot of the "puncture". The author further describes how the heat liberating elements are washed with water at the first AES thus attaining a temperature of 270 ^{o} C, and how, subsequently, electric current is produced. This type of an AES - with water as a heat carrier - has proved its high exploitation qualities, the simplicity of construction and operation. One of the new AES will be exactly of the same type. The author also mentions other types of AES to be built. One of them will be a reactor in which the water will vaporize and, evading the heat exchanger, come direct into the turbine. The author names another kind of heat carrier - gas - without giving particulars.

There are 2 figures and 1 photo.

AVAILABLE: Library of Congress

Card 3/3

The Heart of AES

tightly covered with a uranium tube. The latter grows hot as a result of the fission of atoms, and the liberated heat has to be dissipated immediately. If the removal of heat is impeded, the uranium tube starts to glow immediately and after some time smelts. This can happen if there is a gap, even though of only a few hundredths of millimeter, between the uranium and the steel tube. The air between the uranium rod and the cover has the same detrimental effect as the scale in the tubes of a steam boiler, that is the dissipation of heat will be reduced. The most simple and reliable method to find these gaps, was to heat the uranium tube by letting it pass through a strong electrical current. The steel tube grows cooler at the same time and makes the uranium become cooler, but those places where the uranium does not touch tightly the cover begin to glow and the defect is found.

The author then explains the method applied by the AES in order to locate a "puncture" in the cover of the heat liberating element. Helium gas is blown at the tube while the inside air is sucked off. The air then passes through an electric field where its molecules are ionized. After having been charged, the ionized molecules pass through a magnetic field. The heavier molecules of the air are slight-

MALYKH, V.A.

AUTHOR: Malykh, V.A., Doctor of Technical Sciences 4-11-3/34

TITLE: The Heart of AES (Serdtse AES)

PERIODICAL: Znaniye - Sila, 1957, # 11, p 2-4 (USSR)

ABSTRACT: The author is one of the 4 scientists who were awarded the Lenin Prize for the construction of the first atomic electrical power plant (AES). At present, he is working on the construction of a number of important assemblies for new AES.

The article contains some general information on the USSR electrical plants and more detailed data about the "fuel", the working method, and the experiences gathered in running the first AES plant. At present, a number of atomic power plants with a capacity of 400,000 kw each are being designed and built in the Urals and the central districts of the country. In future their number will increase and the capacity rise, bearing in mind that the larger an AES is, the less expensive is the energy produced by it.

Dealing with the specific difficulties faced by the development of atomic engineering, the author indicates the heat liberating elements as the "furnaces". On the first AES each "furnace" was composed of a steel tube which was

Card 1/3

KHMYROV, V.I., kand.tekhn.nauk; MALYKH, S.P., inzh.

Economic efficiency of gas turbine systems operating on mine methane. Elek. sta. 33 no.8:24-25 Ag '62. (MIRA 15:8)
(Gas turbines) (Methane)

paper of different densities at a top speed of the machine. There is 1 figure.

3(2)
AUTHOR: Malykh, R. N. SOV/6-59-8-19/21

TITLE: The Fan Above the Flat Paper Cutter (Ventilyator nad flatorezkoy)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 8, pp 67-68 (USSR)

ABSTRACT: The author reports on his working experience gathered at the Sverdlovskaya kartograficheskaya fabrika (Sverdlovsk Cartographical Plant). Roll paper with a density of 70 g/m^2 and the format R-84 is difficult to wind off the roll since it does not reach the receiving table in time on account of its light weight so that the succeeding sheet bends it when leaving the machine. R.N. Malykn suggested to attach a table fan one meter above the receiving table of the flat paper cutter in such a way that the air current produced by the fan hits the center of the receiving table. It thus presses the rear edge of the paper to the paper pile so that the succeeding sheet can freely drop from the cutter to the receiving table. However, the air current must not be too strong. For this purpose the proper fan height has to be selected. By the introduction of this process it was made possible to wind off

Card 1/2

KLOCHKOV, V.N., kand. sel'khoz. nauk; MALYKH, P.V., kand. sel'khoz. nauk; ROGASH, A.R., kand. biol. nauk; MONOVA, Ye.S., red.; BELOVA, N.N., tekhn. red.

[Breeding and seed production of fiber flax] Selektsiia i semenovodstvo l'na-dolguntsa. Moskva, Sel'khozizdat, 1963. 189 p. (MIRA 16:9)

(Flax breeding) (Seed production)

MALYKH, P. V.

USSR/Cultivated Plants - Commercial. Oil-Bearing, Sugar-Bearing. I.

Abs Jour : Ref Zhur - Biol., No 12, 1958, 54215

Author : Malykh, P.V.
Inst : -
Title : Cultivation of Long Fibered Flax of the Variety L-4.

Orig Pub : Len i konoplya, 1957, No 12, 11-13

Abstract : No abstract.

Card 1/1

1. KALYKH, P.V.; KLOCHKOV, V.N.

2. USSR (600)

4. Flax

7. New varieties of fiber flax, P.V. Kalykh, V.N. Kochkov, Sel. i sem. 20 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

KLOCHKOV, V.; MALYKH, P.V.

Flax

Beet varieties of fiber flax. Kolkh. proizv. 12 No. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED

L 09941-67
ACC NR: AP6035866

the accuracy of phase-shift measurement of the shf signal, an additional waveguide bridge and shaping circuit for calibrating pulses are included. Orig. art. has: 1 figure.

SUB CODE: 09, 14/ SUBM DATE: 29Jul63/ ATD PRESS: 5105

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900009-6

L 00941-67 EWT(1)/EEC(k)-2
ACC NR: AP6035866

SOURCE CODE: UR/0413/66/000/020/0078/0078

INVENTOR: Malykh, N. I.; Yampol'skiy, Ye. S.

ORG: none

TITLE: A compensation-type shf phasemeter. Class 21, No. 187150

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 78

TOPIC TAGS: phase measurement, electric test equipment

ABSTRACT: An Author Certificate has been issued for a compensation-type shf phasemeter with a phase detector and a waveguide bridge (see Fig. 1). To increase

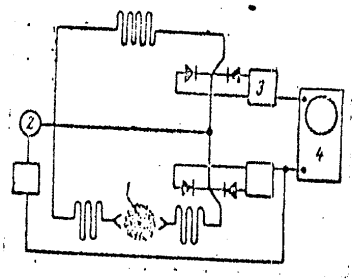


Fig. 1. Shf phasemeter

1 - Plasma; 2 - shf oscillator;
3 - shaping unit; 4 - oscilloscope.

Card 1/2

UDC: 621.317.77.029.6

ACCESSION NR: AP4033118

outfit. Minimum readable phase shift, ~10°; max permissible rate of change of the measurand, 0.2 πrad/microsec; information about the measurand is delivered every two microsec. A block diagram, a circuit diagram of the intensifier-pulse shaper, and a circuit diagram of the sawtooth-voltage shaper are supplied. "L. I. Kompaniyets and G. V. Kubitskiy took part in the development of the phasemeter." Orig. art. has: 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut GKAE SSSR (Physico-Technical Institute, GKAE SSSR)

SUBMITTED: 21May63 ATD PRESS: 3073 ENCL: 00

SUB CODE: EC NO REF SOV: 001 OTHER: 001

Card 2/2

ACCESSION NR: AP4033118 S/0120/64/000/002/0093/0095

AUTHOR: Maly*kh, L. Ya.; Maly*kh, N. I.; Percpelkin, N. F.; Yampol'skiy, Ye. S.

TITLE: Velocity phasemeter for 8-mm band

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 93-95

TOPIC TAGS: phasemeter, 8 mm band phasemeter, superheterodyne phasemeter, plasma, plasma density, density phasemeter

ABSTRACT: A velocity superheterodyne phasemeter operating on the 8-mm wavelength is briefly described. It is intended for (a) measuring the time-average density of plasma by the phase of a signal passing through the plasma and (b) observing movements of the critical-density plasma surface by the phase of the reflected signal. The phasemeter error is 7° plus 1.5° or less due to discrepancies associated with the distance between the meter and the plasma

Card 1/2

ACCESSION NR: AT4025299

of the plasma column passes through the critical value. To determine this connection it is necessary to know the maximum phase of the reflected signal and the form of the distribution of the electrons along the radius of the chamber. The laboratory apparatus used for the purpose is described, and the applicability of the theoretical estimate to practical installations is evaluated. It is shown that when the distance to the plasma is smaller than 70% of the radius, the form of the distribution function influences little the dependence of the phase of the reflected signal on the position of the reflecting surface, so that the proposed method is suitable when the distribution is constant during the time of the measurements, at least if the distance exceeds 70% of the radius. Orig. art. has: 6 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 19Dec63 DATE ACQ: 16Apr64 ENCL: 02

SUB CODE: ME NR REF SOV: 003 OTHER: 001

Card 2/4

ACCESSION NR: AT4025299 S/0000/63/000/000/0104/0111

AUTHORS: Maly*kh, L. Ya.; Maly*kh, N. I.; Perepelkin, N. F.; Utkina, L. A.; Yampol'skiy, Ye. S.

TITLE: Measurement of the diameter of a plasma column by a velocity phase meter

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 104-111

TOPIC TAGS: plasma column, plasma distribution, plasma electromagnetic property, distribution statistics, reflected radiation

ABSTRACT: A procedure is described for measuring the diameter of a reflecting cylindrical plasma surface with density 1.7×10^{13} cm^{-3} by means of a velocity phase meter. The connection between the phase of the reflected signal and the position of the reflecting surface is established for the instant of time when the density on the axis

Card 1/4

racterized by the accumulation of large glaciers around a prominent mountain mass, and dispersed-isolated forms of glaciation were typical of the recent glaciation of the Koryak Mountains. Glacier types include: 27 valley glaciers (covering 33% of the total glaciation area); 141 carr glaciers (52% of the area) and 113 firn glaciers (15% of the area). The location of the snow line was determined and the effect of surface ablation on glacier melting was investigated. Seven newly-discovered areas of recent glaciation are described. The morphometric data obtained and submitted in the article has a sufficient degree of accuracy. Information on the dimensions of the glacier surfaces and their altitudes are correct, and may serve as a criterium in the case of future anomalies which might occur in connection with a further regression of glaciation. There are 3 maps, 3 photos and 24 Soviet references.

AUTHOR: Malykh, M.I. SOV/12-90-6-2/23

TITLE: Recent Glaciation of the Koryak Mountains (Sovremennoye oledeneniye Koryakskoy gornoy sistemy)

PERIODICAL: Izvestiya vsesoyuznogo geograficheskogo obshchestva, 1958, Vol 90, Nr 6, pp 507 - 520 (USSR)

ABSTRACT: Studies on glaciation of the Koryak Mountains are still in an initial stage and there is no exact information available allowing detailed analyses of the dynamics and the interrelation of oroclimatic and historical factors. The article gives information on the results of investigations carried out during a two-year expedition, with the use of aerial photography. The investigated region was located between 60°17' - 63°00' northern latitude and 166°35' - 176°30' eastern longitude. On the whole, 282 glaciers were discovered with a total surface of 179.87 km^2. The physico-geographical conditions of glaciation were analyzed on the basis of interrelations between the relief, the climate, the glacier itself and the degradation of glaciation. The form of glaciation and types of glaciers are described. It was stated that central-concentrated glaciation is cha-

Card 1/2

MALYKH, M.I.

We are raising labor productivity. Gidroliz. i lesokhim. prom. 9 no.4:20 '56. (MLRA 9:11)

1. Brigadir apparatchikov Ashinskogo lesokhimicheskogo kombinata.
(Ethyl acetate)

ACCESSION NR: AP4033118

outfit. Minimum readable phase shift, ~10°; max permissible rate of change of the measurand, 0.2 πrad/microsec; information about the measurand is delivered every two microsec. A block diagram, a circuit diagram of the intensifier-pulse shaper, and a circuit diagram of the sawtooth-voltage shaper are supplied. "L. I. Kompaniyets and G. V. Kubitskiy took part in the development of the phasemeter." Orig. art. has: 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut GKAE SSSR (Physico-Technical Institute, GKAE SSSR)

SUBMITTED: 21May63 ATD PRESS: 3073 ENCL: 00

SUB CODE: EC NO REF SOV: 001 OTHER: 001

Card 2/2

ACCESSION NR: AP4033118 S/0120/64/000/002/0093/0095

AUTHOR: Maly*kh, L. Ya.; Maly*kh, N. I.; Perepelkin, N. F.; Yampol'skiy, Ye. S.

TITLE: Velocity phasemeter for 8-mm band

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 93-95

TOPIC TAGS: phasemeter, 8 mm band phasemeter, superheterodyne phasemeter, plasma, plasma density, density phasemeter

ABSTRACT: A velocity superheterodyne phasemeter operating on the 8-mm wavelength is briefly described. It is intended for (a) measuring the time-average density of plasma by the phase of a signal passing through the plasma and (b) observing movements of the critical-density plasma surface by the phase of the reflected signal. The phasemeter error is 7° plus 1.5° or less due to discrepancies associated with the distance between the meter and the plasma

Card 1/2

ACCESSION NR: AT4025299

of the plasma column passes through the critical value. To determine this connection it is necessary to know the maximum phase of the reflected signal and the form of the distribution of the electrons along the radius of the chamber. The laboratory apparatus used for the purpose is described, and the applicability of the theoretical estimate to practical installations is evaluated. It is shown that when the distance to the plasma is smaller than 70% of the radius, the form of the distribution function influences little the dependence of the phase of the reflected signal on the position of the reflecting surface, so that the proposed method is suitable when the distribution is constant during the time of the measurements, at least if the distance exceeds 70% of the radius. Orig. art. has: 6 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 19Oct63 DATE ACQ: 16Apr64 ENCL: 02

SUB CODE: ME NR REF SOV: 003 OTHER: 001

Card 2/4

ACCESSION NR: AT4025299 S/0000/63/000/000/0104/0111

AUTHORS: Maly*kh, L. Ya.; Maly*kh, N. I.; Perepelkin, N. F.; Utkina, L. A.; Yampol'skiy, Ye. S.

TITLE: Measurement of the diameter of a plasma column by a velocity phase meter

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 104-111

TOPIC TAGS: plasma column, plasma distribution, plasma electromagnetic property, distribution statistics, reflected radiation

ABSTRACT: A procedure is described for measuring the diameter of a reflecting cylindrical plasma surface with density 1.7×10^{13} cm^{-3} by means of a velocity phase meter. The connection between the phase of the reflected signal and the position of the reflecting surface is established for the instant of time when the density on the axis

Card 1/4

L 54000-65
ACCESSION NR: AP5014208

ENCLOSURE: 01

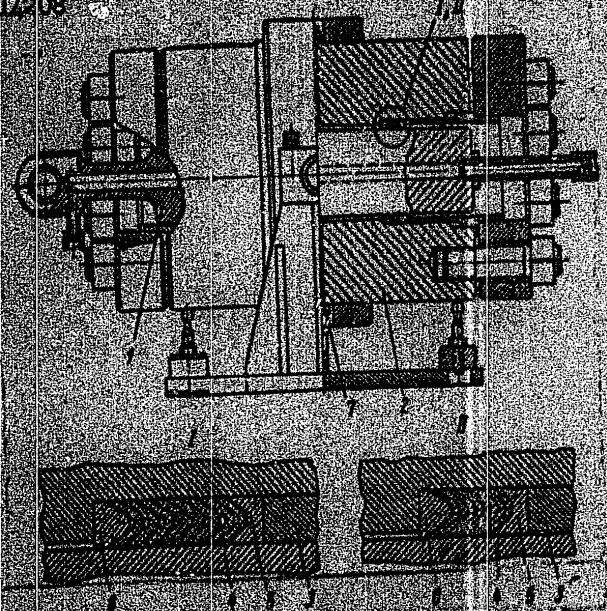
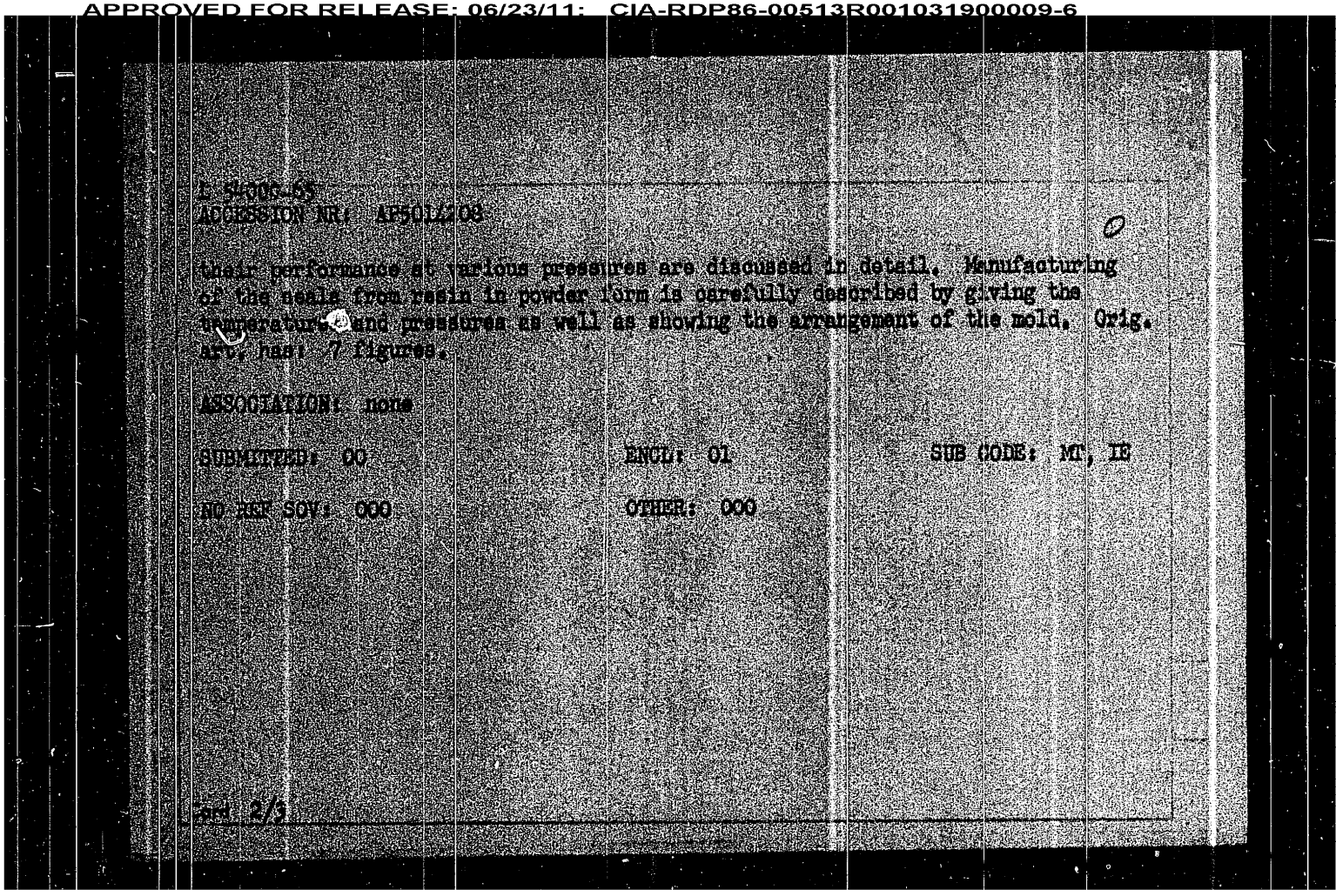


Fig. 1. Working cylinder for testing seals

Card 2/3



L 51006-65
ACCESSION NR: AP5014208

their performance at various pressures are discussed in detail. Manufacturing of the seals from resin in powder form is carefully described by giving the temperature and pressures as well as showing the arrangement of the mold. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: MT, IE

NO REF SOV: 000 OTHER: 000

Card 2/3

L 54000-65 EWT(d)/EWT(m)/EPF(c)/EER/EWP(j)/T/EWA(d)/EWP(v)/EWP(k)/
EWP(h)/EWP(l) Pe-4/Pr-4/Pw-4/Pa-4 WW/RM
ACCESSION NR: AP5012108 UR/0122/65/000/005/0034/0037
621.226-762.64

AUTHORS: Melykh, I. I. (Candidate of technical sciences); Yanova, I. V. (Engineer)

TITLE: Seals made of polyamide resin for high-power hydraulic presses

SOURCE: Vestnik mashinostroyeniya, no. 5, 1965, 34-37

TOPIC TAGS: plastic seal, hydraulic press / P 54 resin, AK 7 resin, P 68 resin

ABSTRACT: The problem of increasing the pressure of a hydraulic press may be reduced to the problem of sealing the plunger in the cylinder at pressures in excess of 15 000 PSI. A typical situation is shown in Fig. 1 on the Enclosure where 1 is the plunger and 2 the cylinder. Detail I shows the old arrangement using seals made of impregnated cloth. In detail II item 4 is the new seal. Roughness of the surfaces, viscosity of the fluid, friction coefficient, etc are discussed. Results are compared between seals made of impregnated cloth and the new seals made of resins P-54, AK-7, and P-68. Only the material P-68 proved to be satisfactory. At 15 000 PSI the leakage decreased from the original 5 cm^3 per hour to 1 cm^3 per hour after 40 hours. The shape of the seals and

Card 1/3

Seals made of polymers. Izobr.i rats. no.2:19-20 F '60.
(MIRA 13:8)

(Sealing (Technology))
(Polymers)

L 9400-65 EWP(d)/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(d)/EWP(t)/EWP(k)/

Oil-Film Bearings of Vertical Rolls of Rolling Mills

SOV/133-59-10-23/39

ASSOCIATION: Central Scientific Research Institute of Technology and Machinery (TsNIITMASh) and Elektrostal' Heavy Machinery Plant (Elektrostal'tyazhmashzavod)

Card 3/3

Oil-Film Bearings of Vertical Rolls of Rolling Mills

SOV/133-59-10-23/39

rolling mill with an estimated rolling force of 24.3 tons. A new set of pads and working rolls were made for experimental purposes. Lubrication characteristics: (1) pressure of lubricant feed before bearings, 0.8 to 0.9 kg/cm^2; (2) oil feed rate for each oil-film bearing, 0.25 dm^3/min; (3) oil temperatures in (a) tank, 55 to 60° C, (b) before bearings, 26 to 30° C, (c) after leaving bearings, 38 to 40° C; (4) oil-film bearing temperatures (at a depth of 4 mm from working surface), 30 to 33° C; (5) changes in lubricant in the system: (a) loss in lubricants, 10 dm^3 diurnally, (b) moisture, 0 to 4%, (c) soiling by admixtures, 0.005 to 0.05%. The usual consumption of lubricant is decreased by 10 times, confirming the thesis of Snegovskiy, F. P. [Ref 1, Vestnik mashinostroyeniya, 1957, Nr 7] that the lubricant passes primarily through the nonworking area and that actually very small amounts of oil are required for the formation of film. Advantages: (1) decreased need of repairs; (2) greater durability, resulting in increased rates of reduction and rolling; and (3) considerable decrease in cost. There are 5 figures; and 2 Soviet references.

Card 2/3

7596
SOV/133-59-10-23/39

18.5100

AUTHORS: Malykh, L. I. (Candidate of Technical Sciences), Ryazanov, A. A. (Engineer)

TITLE: Oil-Film Bearings of Vertical Rolls of Rolling Mills

PERIODICAL: Stal', 1959, Nr 10, pp 926-929 (USSR)

ABSTRACT: A design of oil-film bearings was developed by the Central Scientific Research Institute of Technology and Machinery (TsNIITMASh) in cooperation with Elektrostal' Heavy Machinery Plant (Elektrostal'tyazhmashzavod) with the participation of Ivanov, M. D., Ryazanov, A. A., Kudryavtsev, N. A., Malykh, L. I. It is possible to create oil friction conditions in vertical slider-type bearings provided that: (a) friction surfaces are machined with adequate precision and surface finish; (b) clearance between roll and bearing is filled with lubricant; and (c) quality and quantity of fed lubricant as well as speed of sliding correspond to load. Experimental bearings were tested at Makeyevka Plant imeni Kirov (Makeyevskiy zavod imeni Kirova) in vertical stand "350" of a planetary

Card 1/3

Standardization of Sealing Collars for Bearings 28-58-1-14/34

There are 2 figures.

ASSOCIATION: TsNIITMASh

AVAILABLE: Library of Congress

Card 2/2

MALYKH, L. I.

AUTHOR: Malykh, L.I., Candidate of Technical Sciences 28-58-1-14/34

TITLE: Standardization of Sealing Collars for Bearings (Standartizatsiya manzhetnykh uplotneniy dlya podshipnikovykh uzlov)

PERIODICAL: Standartizatsiya, 1958, # 1, pp 39-41 (USSR)

ABSTRACT: The article gives detailed information on contents of a "GOST"-standard project for "Rubber Sealing Collars for Bearings. "Basic Dimensions and Technical Requirements", prepared by the TsNIITMASh (Central Scientific Research Institute for Technology and Machine-Building). To date, no such standard has existed, and the plants of different industrial branches have been using the branch standard and producing the metal reinforcement parts themselves, which were then sent to rubber plants for final collar production.

The "GOST" project standardizes sealing collars for work in temperatures between -40 and +100° C, with brief intervals of up to 125° C, at shaft circumference speed up to 10 m/sec, for shaft diameters from 6 to 1,500 mm. The designs are shown in cross section in two illustrations. Application conditions for the sealing collars are also specified.

Card 1/2

of the motor causes the spring to be strained, which can be seen from the reading of a corresponding scale. The motor shaft is firmly mounted on the base plate by 2 bearings in 2 solid brackets. The machine is of the "LTC" type and has a special lubrication system. The second test suggested here is used for testing bearings of 180-275 mm diameter up to a pressure stress of 200 kg/cm^2 and 15 m/sec. The bearing part under investigation in this case is of box shape. The horizontal shaft of the testing device is connected with the motor shaft by means of an elastic coupling and has a conically widened part in its middle part over which the box to be tested is placed. The shaft itself is firmly mounted in 2 solid bearings; the middle bearing is movable in a vertical direction, and while in operation it is pressed upwards by a strong vertical propeller shaft. The motion of the latter is caused by hand by means of a lever and a pair of bevelled gears. As this shaft operates only on a very short stretch because of the pressure exercised on the bearing to be tested, this work can easily be performed by hand. Exact technical data are given. There are 3 figures.

ASSOCIATION: Central Scientific Research Institute for Technology and Machine Building (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya)

AVAILABLE: Library of Congress

Malykh, L.I.

AUTHORS: Al'shits, I.Ya., Malykh, L.I., Snegovskiy, F.P. 32-11-43/60

TITLE: Devices for Testing the Friction Bearings and the Anti-Friction Properties of Materials (Ustanovki dlya ispytaniya podshipnikov skol'-sheniya i antifriksionnykh svoystv materialov)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1380-1383 (USSR)

ABSTRACT: In this paper 2 such devices are described and their operation is explained. According to the scheme mentioned, the first of these devices consists of a firmly mounted frame with 2 bearings in which a shaft moves in 2 bearings (in a horizontal position). On this shaft, in the center of the frame, a conical sleeve is mounted, above which the third bearing is located, which is not fixed but can be moved downwards by means of a lever system. The other end of this lever is provided with a hard spiral which can be tightened by hand by means of a winged nut or by means of a motor, which can be recorded on the scale at the end of the spiral. Pressure brought to bear upon this spring causes traction to act upon the bearing in the center of the frame. Into this bearing samples of the substance to be tested are inserted. The aforementioned shaft is connected with another shaft by means of an elastic coupling, upon which the (freely mounted) reaction motor is located. It is connected with the base plate by means of a draw spring. The centrifugal force

Card 1/2

MALYKH, L.

32-8-54/61

AUTHORS Bornatskiy, I.I., Malykh, L., Candidates of Technical Sciences

TITLE On the Rôle Played by Works Laboratories in the Technical Progress of Industry (of the U.S.S.R.)
(O roli zavodskikh laboratoriy v tekhnicheskom progresse promyshlenno s ti - Russian)

PERIODICAL Zavodskaya Laboratoriya, 1957, Vol 23, Nr 8, pp 1005-1007 (U.S.S.R.)

ABSTRACT The works laboratory of the "Makeyevka-Metallurgy-Works, Kirov" is mentioned here as a model. The mentioned laboratory was in recent time enlarged to a great extent the report says. First-rate technical-scientists are working here. At present the laboratory is divided into several departments: technological laboratory for agglomerations and blast furnaces production, laboratories for steel casting and rolled metals, laboratories for metallurgy, for physical metal research methods with rich apparatus equipment for radio structural analysis, works with radioactive isotops and other laboratories which are also equipped with the most recent apparatus. It is pointed out that the works owe the numerous practical innovations carried out here to their laboratories as it is described here: production of the ferric manganese agglomerate, application of the liquified agglomerate in the blast furnaces which makes the work of the latter much more productive, strengthening of the ingot molds by steel bands, siphon-like reduction of the steel casting from the ingot molds, innovations in the metal rolling which in the course of 1956 saved 5,4 million roubles;

Card 1/2

AID P - 4280

Vest. mash., #2, p. 18-22, F 1956

Card 2/2 Pub. 128 - 5/25

Institution : None

Submitted : No date

MALYKH, L. I.

AID P - 4280

Subject : USSR/Engineering

Card 1/2 Pub. 128 - 5/25

Authors : Saverin, M. M., Prof., Dr. Tech. Sci. and L. I. Malykh, Engineer

Title : Testing of conical safety clutches at various temperatures

Periodical : Vest. mash., #2, p. 18-22, F 1956

Abstract : Conical friction clutches are susceptible to temperature changes, especially when the angle of the engaging surfaces is small. The torque in clutches of this type with various pairs of surface materials and at changeable temperatures has been tested on special installations which allowed its registration on a loop oscillograph. The results of tests showing the best material and the most advantageous angle of the engaging surfaces to be used are given. Diagram, table, charts.

MALYKH, L. I.

MALYKH, L. I.: "Research on the operation of some protective sleeves at various temperatures". Moscow, 1955. Min Heavy Machine Building USSR, Central Sci-Res Inst of Technology and Machine Building (TsNIITMash). (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

VYSOTSKIY, B.V.; MAIYKH, F.S.; KHUDYAKOV, I.S.

Results of a survey on leptospirosis in small mammals in Shkotovo District of the Maritime Territory. Trudy VladIEMG no.23:58 '62. (MIRA 18:3)

VYSOTSKIY, B.V.; ANAN'IN, V.V.; MALYKH, F.S.

Field mice as leptospiral reservoirs of the javanica serological group in Maritime Territory. Preliminary report. Zhur. mikrobiol., epid. i immun. 41 no.5:70-72 My '64. (MIRA 18:6)

1. Vladivostokskiy institut epidemiologii, mikrobiologii i gigiyeny i Institut epidemiologii i mikrobiologii imeni Gamaleya AMN SSSR.

SPIVAK, M.Ya.------- (continued) Card 2.

Moskovskoy zheleznoy dorogi (for Brudnaya, Godina). 8. Iz Vrachebno-sanitarnoy sluzhby Severnoy zheleznoy dorogi (for Vol'fson, Sosonko, Kolesinskaya). 9. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny i Primorskoy krayevoy protivochumnoy stantsii (for Vysotskiy, Malykh, Mirotvortsev, Sychevskiy, Gopachenko). 10. Iz Yaroslavskogo meditsinskogo instituta (for Karpitskaya). 11. Iz Aralmorskoy protivochumnoy stantsii (for Fetisova). 12. Iz L'vovskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Martynyuk, Emdina).

SPIVAK, M.Ya.; ARGUDAYEVA, N.A.; NABIYEV, E.G.; CHISTOVICH, G.N.; RIVLIN, M.I.; SEMENOV, M.Ya.; KRUGLIKOV, V.M.; SHAL'NEVA, A.M.; TITROVA, A.I.; RAYKIS, B.N.; MILYAYEVA, Ye.N.; BRUDNAYA, E.I.; GODINA, I.F.; VOL'FSON, G.I.; SOSONKO, S.M.; KOLESINSKAYA, L.A.; VYSOTSKIY, B.V.; MALYKH, F.S.; MIROTVORTSEV, Yu.I.; SYCHEVSKIY, P.T.; GOPACHENKO, I.M.; KARPITSKAYA, V.M.; FETISOVA, I.A.; MARTYNYUK, Yu.V.; EMDINA, I.A.

Annotations. Zhur. mikrobiol., epid. i immun. 40 no.3:128-131 Mr '63. (MIRA 17:2)

1. Iz Kemerovskogo meditsinskogo instituta i Kemerovskoy klinicheskoy bol'nitsy No.3 (for Spivak, Argudayeva). 2. Iz Kazanskogo instituta usovershenstvovaniya vrachey imeni Lenina (for Nabiyev). 3. Iz Leningradskogo kozhnogo dispansera No. 1 (for Chistovich, Rivlin). 4. Iz Rostovskoy oblastnoy sanitarno-epidemiologicheskoy stantsii (for Semenov). 5. Iz Stavropol'skogo instituta vaktsin i syvorotok (for Kruglikov, Shal'neva, Titrova, Raykis). 6. Iz Kuybyshevskogo instituta epidemiologii, mikrobiologii i gigiyeny i TSentral'nogo instituta usovershenstvovaniya vrachey (for Milyayeva). 7. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnoy gigiyeny Glavnogo sanitarnogo upravleniya Ministerstva putey soobshcheniya i Detskoy poliklinik st. Lyublino

(Continued on next card)

VYSOTSKIY, B.V.; MALYKH, F.S.

Preliminary data on the effect of cortisone on elptospirosis in white mice. Zhur.mikrobiol., epid.i immun. 33 no.8:46-48 Ag '62. (MIRA 15:10)

1. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(LEPTOSPIROSIS) (CORTISONE)

MALYKH, F.S.

Pathogenicity of Leptospira muris for young rabbits and guinea pigs. Trudy VladIEMG no.2:82-85 '62. (MIRA 18:3)

1. Iz Vladivostokskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny.

MALYKH, F.S.

Some data on reservoirs of Leptospira mor... . Trudy VladIEMG no.2:78-81 '62. (MIRA 18:...)

1. Iz Vladivostokskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny.

VYSOTSKIY, B.V.; MALYKH, F.S.; PROKOF'YEV, A.A.

Some data on the etiology of leptospirosis in farm animals and the ways of effective prevention of this infection in the Territory. Trudy VladIEM no.2:68-73 '62. (MIRA 18:5)

1. Iz Vladivostokskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny.

VYSOTSKIY, B.V.; MALYKH, F.S.; MIROTVORTSEV, Ju.I.; KIZILOVA, M.D.; SYCHEVSKIY, P.T.

Data of a survey on leptospirosis in murine rodents in Slavyanka and Pogranichnyi Districts of the Maritime Territory. Trudy VladIEMG no.2:60-68 '62. (MIRA 18:3)

1. Iz Vladivostokskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny i Primorskoy krayevoy protivochumnoy stantsii.

VYSOTSKIY, B.V.; MALYKH, F.S.; MUDRAYA, L.A.; SIONOV, M.N.; RAKHILIN, V.K.

Results of a survey on leptospirosis in warm-blooded animals in the mountain regions of the Maritime Territory. Trudy VladIEMG no.2:59-60 '62. (MIRA 18:3)

1. Iz Vladivostokskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny i Sikhote-Alinskogo zapovednika.

MALYKH, F.S.

Pathogenicity of L.muris for young rabbits and guinea pigs. Zhur. mikrobiol. epid. i immun. 31 no. 5:121 My '60. (MIRA 13:10)

1. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(LEPTOSPIRA)

VYSOTSKIY, B.V.; MALYKH, F.S.; PROKOF'YEV, A.A.

Some data on leptospirosis in cats. Zhur.mikrobiol.epid.i immun. 31 no.2:140-141 F '60. (MIRA 13:6)

1. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(LEPTOSPIROSIS veterinary)

MALYKH, F.S.

Some data on natural leptospurosis infection in white mice.
Zhur.mikrobiol.epid.i immun. 31 no.2:71-74 F '60. (MIRA 13:6)

1. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(LEPTOSPIROSIS veterinary)

S/016/60/000/05/71/079

AUTHOR: Malykh, F.S.

TITLE: The Pathogenicity of Leptospira Muris for Young Rabbits and Guinea Pigs.

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, No. 5, p. 121

TEXT: The pathogenicity of Leptospira muris strains isolated from white mice was determined by infecting young rabbits and guinea pigs intra-abdominally with cultures of the strains. Marked febrile reactions and, in some cases, death were evidence of the strains' pathogenicity for rabbits. The animals' sera contained antibodies in titers of 1:2,000 to 1:29,000. The leptospires were not pathogenic for young guinea pigs, but their sera contained antibodies to homologous strains in titers of from 1:400 to 1:1,500.

ASSOCIATION: Vladivostokskiy institut epidemiologii, mikrobiologii i gigiyeny (Vladivostok Institute of Epidemiology, Microbiology and Hygiene)

Card 1/1

MALYKH, F. S.

"Data on Reservoirs of Leptospira Muris in Nature."

Tenth Conference on Parsitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Vladivostok Scientific Research Institute of Epidemiology, Microbiology and Hygiene

VYSOTSKIY, B.V.; MALYKH, F.S.; KUZNETSOV, A.P.

Game animals as supplementary reservoirs of pathogenic Leptospira in natural conditions. Zhur. mikrobiol. epid. i immun. 29 no.8:49-51 Ag '58. (MIRA 11:10)

1. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(LEPTOSPIROSIS, transm.
by wild animals (Rus))
(ANIMALS, dis.
leptospirosis, transm. by wild animals (Rus))

Analysis of Gases and Vapours Based on the Negative Optico-acoustic Effect.

ASSOCIATION: Leningrad Institute of Precision Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki.)

SUBMITTED: February 4, 1957.

AVAILABLE: Library of Congress.

Card 3/3

Analysis of Gases and Vapours Based on the Negative Optico-acoustic Effect.

with CO_2 gas. In front of the receiver they placed a container (C) filled with the gas under study. Behind this container a refrigerator was placed. Between the container C and the receiver a disc with apertures was rotated. The optico-acoustic receiver contained a microphone connected to an amplifier. The amplified signal was rectified and measured by a d.c. instrument. Radiation was modulated at 1100 c/s. When C was filled with air the signal was at its maximum. On introduction of CO_2 into C the signal decreased. It was found that using this method down to 0.% of CO_2 in air could be detected. The calibration curve of this apparatus was similar to the calibration curves for the usual optico-acoustic gas analysers (Ref.1). Use of better component parts in this apparatus would make the sensitivity of the negative effect method of the order of the sensitivity of the usual (positive) optico-acoustic method. There are 2 references, both of which are Slavic.

Card 2/3

MALYKH E. V.

51-6-24/26

AUTHORS: Veyngerov, M. L., Sivkov, A. A., and Malykh, E. V.

TITLE: Analysis of Gases and Vapours based on the Negative Optico-acoustic Effect. (Analiz gazov i parov, osnovannyy na otritsatel'nom optiko-akusticheskom yavlenii.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.II, Nr.6, pp. 823-825. (USSR)

ABSTRACT: Action of the usual optico-acoustic gas analysers is based on the fact that radiation of the source after passing through the gas studied and then modulated at a certain frequency causes pressure pulsations in the optico-acoustic receiver due to periodic heating of the gas in the receiver. It is possible, however, to use the negative optico-acoustic effect (Ref.1), i.e. instead of a source of heat it is possible to use a refrigerator which is a body with a temperature much lower than the temperature of the gas in the receiver. The authors verified the possibility of use of this negative effect by filling an optico-acoustic receiver

Card 1/3

80516

SOV/169-60-1-641

The Connection Between the Pressure Variations Near the Earth Surface and in the Free Atmosphere

troposphere and the lower stratosphere further either a decrease in pressure near the earth surface (deepening of cyclone) or an increase in pressure (developing of anticyclone) when barometric systems are evolving. Tables of the semidiurnal variations of the relative geopotential of the isobaric surfaces and of the variation of the mean temperature in various layers are added. The tables show that the variations in these quantities in the region of collapsing barometric systems have different signs within the boundaries of the troposphere and equal signs in the lower stratosphere. The variations of the absolute geopotential of the isobaric surfaces and of the mean temperature have equal signs in the troposphere and different signs in the lower stratosphere when the barometric systems are evolving. The author presents a qualitative explanation of the regularities mentioned above.

A.S. Britayev

Card 3/3

The Connection Between the Pressure Variations Near the Earth Surface and in the Free Atmosphere

proceed in the layer at an altitude from 8 to 12 km and higher in anti-cyclones in the case of increasing pressure and in cyclones in the case of decreasing pressure. The layer at an altitude of 0 - 4 km makes the most considerable contribution to the variation of pressure near the earth in collapsing cyclones and anticyclones. Moreover, the calculation of the variations in the altitudes of the isobaric surfaces in connection with the pressure variation near the earth surface was performed. It was ascertained that the maximum variation in pressure in developing cyclones and anticyclones was observed in the layer at an altitude of 8 - 10 km (in the isobaric surface AT_{300}). The maximum mentioned earlier was observed in collapsing anticyclones and developing cyclones near the earth surface. Supplemental calculations showed that a close connection existed in the evolution of barometric systems between the pressure variation near the earth surface and the variation in the altitude of isobaric surfaces up to the AT_{200} level. A still closer connection was observed between the quantities mentioned in the case of collapsing of the barometric systems up to the AT_{500}-level. Therefore, all air layers within the

Card 2/3

80516

SOV/169-60-1-641

3.9000

Translation from: Referativnyy zhurnal, Geofizika, 1960, Nr 1, p 83 (USSR)

AUTHOR: Malykh, B.P.

TITLE: The Connection Between the Pressure Variations Near the Earth Surface and in the Free Atmosphere

PERIODICAL: V sb.: Probl. Arktiki. Nr 5, Leningrad, "Morsk. transport", 1958, pp 57 - 65

ABSTRACT: The author undertakes an attempt to estimate the role of the individual atmosphere layers in variation of pressure near the earth surface, in the main for the central regions of cyclones and anticyclones. Two hundred and fifty-four radiosonde ascents in the warm season of 1951 from the "Severnyy-Polyus-3"-station were utilized for calculations. The difference in pressure between two consequent ascents of the radiosondes near the earth amounted to at least 2 mb in 12 hours. The computations were performed for the layers at an altitude of 0 - 4, 4 - 8, 8 - 12 km, and beyond 12 km. The results are presented in tables. The tables show that the most considerable variations of the masses

Card 1/3

MALYKH, A.V.; KNYAZEV, A.A., redaktor; SARMATSKAYA, G.I., redaktor; KARASIK, N.P., tekhnicheskiy redaktor.

[Manual for the foreman of a crate shop] Pamiatka masteru tarnogo tsekha. Moskva, Goslesbumizdat, 1954. 30 p. (MLRA 8:4)

1. Russia (1923- U.S.S.R.) Ministerstvo lesnoy promyshlennosti. (Container industry)

L 29866-66

ACC NR: AP6013211

Here p is the layer pressure; p^0 is the atmospheric pressure; γ^0 is the specific weight of the gas under atmospheric conditions; ξ is the coefficient of compressibility. Orig. art. has: 5 formulas and 3

SUB CODE: 20/ SUBM DATE: 15Jun65/ ORIG REF: 004/ OTH REF: 001

Card 2/2

[redacted]866-66 EWT(1)/EWP(m)

ACC NR: AP6013211 SOURCE CODE: UR/0421/66/000/002/0127/0129

46
B

AUTHOR: Minskiy, Ye. M. (Moscow); Malykh, A. S. (Moscow)

ORG: none

TITLE: Calculation of the operation of a system of gas openings draining a closed gas layer

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 2, 1966, 127-129

TOPIC TAGS: porosity, gas flow, filtration

ABSTRACT: The formulation of the problem leads to the solution of a nonlinear differential equation of the second order in partial derivatives with respect to the pressure, with determined initial and boundry conditions. The basis of the calculation is the equation for the movement of a gas in porous medium, taking account of the removal or the inflow of gas in some regions of the layer. Using the ordinary equation for the linear filtration resistance (Darcy's Law) and the equation of state, taking into account the compressibility of the gas, we have

$$2m(x, y)h(x, y)\frac{\partial}{\partial t}\frac{p}{\zeta} = \frac{\zeta}{\mu}\left\{\frac{\partial}{\partial x}\left[k(x, y)h(x, y)\frac{\partial}{\partial x}\left(\frac{p}{\zeta}\right)^{*}\right] + \right.$$
$$\left. + \frac{\partial}{\partial y}\left[k(x, y)h(x, y)\frac{\partial}{\partial y}\left(\frac{p}{\zeta}\right)^{*}\right]\right\} + \frac{p^{\circ}}{\gamma^{\circ}}\beta(x, y, t) \qquad (2)$$

Card 1/2

MINSKIY, Ye.M.; MALYKH, A.S.

Concerning the central location of wells on the basis of a study of the North Stavropol gas field. Trudy VNIIGAZ no.18/26:71-88 '63. (MIRA 18:3)

Applying fast digital ...

culations graphs of the deposit area pressure distribution were obtained which correspond to various values of the deposit gas output. 4 references. [Abstractor's note: Complete translation.]

Card 3/3

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...al ...
...s of the deposit area pressure distribution were ob-
...correspond to various values of the deposit gas cut-
...erences. [Abstractor's note: Complete translation.]

Card 3/3

Applying fast digital ...

are given as obtained in the digital computer "Strela". The fundamental equation is

$$m \frac{\partial p}{\partial t} = \frac{k}{2\mu} \cdot \frac{1}{\theta(r)} \cdot \frac{\partial}{\partial r} \left[\theta(r) \frac{\partial p^2}{\partial r} \right]$$

where p = pressure, t = time, r = distance from the center, $\theta(r)$ = area of the active cross-section of filtrating stream; k = penetrability, m = porosity and μ = gas viscosity. The boundary conditions were assumed to be as follows: at $r = r_k$, $\frac{\partial p^2}{\partial r} = 0$; at $r = r_c$, $\frac{\partial p^2}{\partial r} = \frac{q\mu RT}{k\pi}$ (q = constant output by weight). Good agreement has been obtained with solutions as published in the Trans. A.I.M.E., 1953, 198, 79 (USA). For checking the calculations, the fundamental equation has been presented in a dimensionless form. As a result of cal-

Card 2/3